

Notice of Allowability**Application No.**

10/047,076

Applicant(s)

HYTROS ET AL.

Examiner

Jeffrie R. Lund

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to ____.
2. ☒ The allowed claim(s) is/are 1-4,8-17,20-24 and 28.
3. ☒ The drawings filed on 15 January 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 603,202,102
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date ____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

Jeffrie R. Lund
Primary Examiner
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EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Keith Taboada on May 17, 2004.

The application has been amended as follows:

Claim 1 has been amended to read:

1. (currently amended) A showerhead assembly for distributing gases within a processing chamber, comprising:

a cylindrical member having an outwardly extending first flange at a first end; and
a disk having a plurality of holes formed through a center region of the disk, the disk coupled to the cylindrical member at a second end in a manner that permits relative movement therebetween;

a mounting ring coupled to the second end of the cylindrical member; and
at least one clamp member coupled to the mounting ring and sandwiching the
disk therebetween.

Claims 5-7 have been cancelled.

Claim 8 has been amended to read:

8. (currently amended) The showerhead assembly of claim 7 1, wherein the clamp member further comprises:

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an at least partially cylindrical body; and

a tab extending radially inward from the body.

Claim 14 has been amended to read:

14. The showerhead assembly of claim 7 1, wherein at least one of the cylindrical member, clamp member, and the clamp mounting ring is nickel.

Claims 18 and 19 have been cancelled.

Claim 20 has been amended to read:

20. (currently amended) A showerhead assembly for distributing gases within a processing chamber, comprising:

a cylindrical member having an outwardly extending flange at a first end;

a disk having a plurality of holes formed though a center region of the disk;

at least one clamp member slidably retaining the disk proximate the second end of the cylindrical member; and

~~The showerhead assembly of claim 19 further comprising a mounting ring coupled to the second end of the cylindrical member, the clamp member fastened to the cylindrical member and sandwiching the disk therebetween.~~

Claim 22 has been amended to read:

22. (currently amended) The showerhead assembly of claim 19 20, wherein the clamp member is comprised of a plurality of segmented arcs.

Claims 25-27 have been cancelled.

2. The following is an examiner's statement of reasons for allowance: the showerhead assembly as claimed in claims 1, 20, and 28, specifically, a cylindrical

member having an outwardly extending flange at a first end; a disk having a plurality of holes formed through a center region of the disk; at least one clamp member slidably retaining the disk proximate the second end of the cylindrical member; and a mounting ring coupled to the second end of the cylindrical member, the clamp member fastened to the cylindrical member and sandwiching the disk therebetween; and the showerhead assembly as claimed in claim 23, specifically, the structure in total were not found in or suggested by the art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (571) 272-1437. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (571) 272-1439. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Jeffrie R. Lund'.

Jeffrie R. Lund
Primary Examiner
Art Unit 1763

JRL
5/17/04